

AMENDMENTS TO THE CLAIMS

1. (PREVIOUSLY PRESENTED) An accommodating intraocular lens for implantation in an eye having an optical axis, said lens comprising:

an anterior viewing element comprised of an optic having refractive power of less than 55 diopters; and

a posterior viewing element comprised of an optic having refractive power, said optics providing a combined power of 15-25 diopters, said optics mounted to move relative to each other along the optical axis between an accommodated position and an unaccommodated position in response to a force by the ciliary muscle of the eye, said relative movement corresponding to change in the combined power of the optics of at least one diopter;

wherein said anterior optic and said posterior optic are positioned further apart when in the accommodated position than when in the unaccommodated position, and said optics are biased toward said accommodated position.

2. (ORIGINAL) The lens of Claim 1, wherein said optics are mounted to move relative to each other along the optical axis in response to a contractile force by the ciliary muscle of the eye upon the capsular bag of the eye of up to 2.0 grams.

3. (ORIGINAL) The lens of Claim 1, wherein said anterior viewing element comprises an optic having a refractive power of less than 40 diopters.

4. (ORIGINAL) The lens of Claim 1, wherein said anterior viewing element comprises an optic having a refractive power of less than 35 diopters.

5. (ORIGINAL) The lens of Claim 1, wherein said anterior viewing element comprises an optic having a refractive power of less than 30 diopters.

6. (ORIGINAL) The lens of Claim 1, wherein said posterior viewing element comprises an optic having a refractive power between -25 and 0 diopters.

7. (ORIGINAL) The lens of Claim 1, wherein said posterior viewing element comprises an optic having a refractive power between -25 and -15 diopters.

8. (ORIGINAL) The lens of Claim 1, wherein said posterior viewing element comprises an optic having a refractive power between -15 and 0 diopters.

9. (ORIGINAL) The lens of Claim 1, wherein said posterior viewing element comprises an optic having a refractive power between -13 and -2 diopters.

10. (ORIGINAL) The lens of Claim 1, wherein said posterior viewing element comprises an optic having a refractive power between -10 and -5 diopters.

11. (ORIGINAL) The lens of Claim 1, wherein said relative movement of said optics includes an accommodated position and an unaccommodated position, said optics being about 0.5 - 4 millimeters closer together when in the unaccommodated position.

12. (ORIGINAL) The lens of Claim 1, wherein said relative movement of said optics includes an accommodated position and an unaccommodated position, said optics being about 1 - 3 millimeters closer together when in the unaccommodated position.

13. (ORIGINAL) The lens of Claim 1, wherein said relative movement of said optics includes an accommodated position and an unaccommodated position, said optics being about 1 - 2 millimeters closer together when in the unaccommodated position.

14. (ORIGINAL) The lens of Claim 1, wherein said relative movement of said optics includes an accommodated position and an unaccommodated position, said optics being about 1.5 millimeters closer together when in the unaccommodated position.

15. (ORIGINAL) The lens of Claim 1, wherein:

said lens has a thickness between an anterior face of the anterior viewing element and a posterior face of the posterior viewing element;

said relative movement of said optics includes an accommodated position and an unaccommodated position; and

said thickness decreases from about 3.0 - 4.0 millimeters in the accommodated position to about 1.5 - 2.5 millimeters in the unaccommodated position.

16. (ORIGINAL) The lens of Claim 13, wherein:

said lens has a thickness between an anterior face of the anterior viewing element and a posterior face of the posterior viewing element;

said relative movement of said optics includes an accommodated position and an unaccommodated position; and

said thickness decreases from about 3.0 - 4.0 millimeters in the accommodated position to about 1.5 - 2.5 millimeters in the unaccommodated position.

17. (ORIGINAL) The lens of Claim 14, wherein:

said lens has a thickness between an anterior face of the anterior viewing element and a posterior face of the posterior viewing element;

said relative movement of said optics includes an accommodated position and an unaccommodated position; and

said thickness decreases from about 3.0 - 4.0 millimeters in the accommodated position to about 1.5 - 2.5 millimeters in the unaccommodated position.

18-21. (CANCELLED)

22. (PREVIOUSLY PRESENTED) The lens of Claim 1, further comprising:

an anterior biasing element comprising first and second anterior translation members extending from the anterior viewing element; and

a posterior biasing element comprising first and second posterior translation members extending from the posterior viewing element.

23. (PREVIOUSLY PRESENTED) The lens of Claim 22, wherein at least a portion of at least one of said first and second anterior translation members has an outer surface which is substantially flat.

24. (PREVIOUSLY PRESENTED) The lens of Claim 22, wherein at least a portion of at least one of said first and second anterior translation members has an outer surface which is generally convex.

25. (PREVIOUSLY PRESENTED) The lens of Claim 22, wherein at least a portion of at least one of said first and second posterior translation members has an outer surface which is substantially flat.

26. (PREVIOUSLY PRESENTED) The lens of Claim 22, wherein at least a portion of at least one of said first and second posterior translation members has an outer surface which is generally convex.

27-30. (WITHDRAWN)

31. (PREVIOUSLY PRESENTED) The lens of Claim 1, wherein:
at least one of said viewing elements is a biconvex optic;
said biconvex optic has first and second surfaces;
said first surface has a radius of curvature of about 5.944 mm; and
said second surface has a radius of curvature of about 5.944 mm.

32. (PREVIOUSLY PRESENTED) The lens of Claim 1, wherein:
at least one of said viewing elements is a biconvex optic;
said biconvex optic has first and second surfaces;
said first surface has a radius of curvature of about 5.656 mm; and
said second surface has a radius of curvature of about 7.788 mm.

33. (PREVIOUSLY PRESENTED) The lens of Claim 1, wherein:
at least one of said viewing elements is a biconvex optic;
said biconvex optic has first and second surfaces;
said first surface has a radius of curvature of about 6.961 mm; and
said second surface has a radius of curvature of about 8.5 mm.

34. (PREVIOUSLY PRESENTED) The lens of Claim 1, wherein:
at least one of said viewing elements is a biconcave optic;
said biconcave optic has first and second surfaces;
said first surface has a radius of curvature of about 18.765 mm; and
said second surface has a radius of curvature of about 18.765 mm.
35. (PREVIOUSLY PRESENTED) The lens of Claim 1, wherein:
at least one of said viewing elements is a concave-convex optic;
said concave-convex optic has anterior and posterior surfaces;
said concave-convex optic has a refractive power of -8 diopter;
said anterior surface has a radius of curvature of between about 9 mm and 9.534 mm; and
said posterior surface has a radius of curvature of about 40 mm.
36. (PREVIOUSLY PRESENTED) The lens of Claim 1, wherein:
at least one of said viewing elements is a concave-convex optic;
said concave-convex optic has anterior and posterior surfaces;
said concave-convex optic has a refractive power of -5 diopter;
said anterior surface has a radius of curvature of between about 9 mm and 9.534 mm; and
said posterior surface has a radius of curvature of about 20 mm.
37. (PREVIOUSLY PRESENTED) The lens of Claim 1, wherein:
said anterior viewing element comprises an optic having a refractive power of +31 diopter; and
said posterior viewing element comprises an optic having a refractive power of -10 diopter.
38. (PREVIOUSLY PRESENTED) The lens of Claim 1, wherein:

said anterior viewing element comprises an optic having a refractive power of +28 diopter; and

said posterior viewing element comprises an optic having a refractive power of -8 diopter.

39. (PREVIOUSLY PRESENTED) The lens of Claim 1, wherein:
said anterior viewing element comprises an optic having a refractive power of +24 diopter; and
said posterior viewing element comprises an optic having a refractive power of -5 diopter.

40. (PREVIOUSLY PRESENTED) The lens of Claim 22, wherein:
said first anterior translation member and said first posterior translation member meet at a first apex;
said second anterior translation member and said second posterior translation member meet at a second apex;
said relative movement of said optics includes an accommodated and an unaccommodated position; and
said lens further comprises first and second biasers located near said first and second apices, respectively, and configured to bias said optics toward one of said accommodated position and said unaccommodated position.) ✓ *conducting*

41. (PREVIOUSLY PRESENTED) The lens of Claim 40, wherein at least one of the biasers is a U-shaped spring member located adjacent to one of said apices.

42. (PREVIOUSLY PRESENTED) The lens of Claim 40, wherein at least one of the biasers is a longitudinal-compression spring spanning one of said apices and interconnecting the anterior biasing element and the posterior biasing element.

43. (PREVIOUSLY PRESENTED) The lens of Claim 1, wherein at least one of said optics is a removable optic.

44-45. (WITHDRAWN)

46. (PREVIOUSLY PRESENTED) The lens of Claim 1, wherein at least one of said optics is formed from photosensitive silicone.

47. (PREVIOUSLY PRESENTED) The lens of Claim 22, further comprising a heparin coating over at least a portion of said lens.

48. (PREVIOUSLY PRESENTED) The lens of Claim 47, wherein said coating is applied to at least a portion of the posterior biasing element.

49. (PREVIOUSLY PRESENTED) The lens of Claim 47, wherein said coating is applied to at least a portion of the posterior viewing element.

50. (PREVIOUSLY PRESENTED) The lens of Claim 1, further comprising an active coating over at least a portion of said lens.

51. (PREVIOUSLY PRESENTED) The lens of Claim 50, wherein said coating is selected from the group consisting of P-15 peptides and RGD peptides.

52. (PREVIOUSLY PRESENTED) The lens of Claim 1, further comprising a passive coating over at least a portion of said lens.

53. (PREVIOUSLY PRESENTED) The lens of Claim 52, wherein said coating is selected from the group consisting of heparin, collagen, fibronectin, and laminin.

54. (PREVIOUSLY PRESENTED) The lens of Claim 1, further comprising a coating, over at least a portion of said lens, which coating is inert with respect to the capsular bag of the eye.

55. (PREVIOUSLY PRESENTED) The lens of Claim 54, wherein said coating is selected from the group consisting of hirudin, Teflon, PVDF, and fluorinated polymers.

56. (PREVIOUSLY PRESENTED) The lens of Claim 54, wherein said coating is applied on locations on the lens which contact the capsular bag when implanted.

57. (PREVIOUSLY PRESENTED) The lens of Claim 54, wherein said coating is applied over at least a portion of at least one of said optics.

58. (PREVIOUSLY PRESENTED) The lens of Claim 1, wherein at least one surface of said lens is passivated.

59. (PREVIOUSLY PRESENTED) The lens of Claim 1, wherein at least one surface of said lens has a surface finish that is rougher than the remaining surfaces of said lens.

60. (PREVIOUSLY PRESENTED) The lens of Claim 1, wherein at least one surface of said lens has a textured surface finish.

61. (PREVIOUSLY PRESENTED) The lens of Claim 1, further comprising a posteriorly-extending perimeter wall surrounding a posterior surface of the posterior viewing element.

62. (PREVIOUSLY PRESENTED) The lens of Claim 1, wherein said posterior viewing element is relatively thick as measured along the optical axis.

63. (PREVIOUSLY PRESENTED) The lens of Claim 1, wherein at least one surface of said lens is polished.

64. (PREVIOUSLY PRESENTED) The lens of Claim 1, wherein at least one surface of said lens is cleaned.

Appl. No. : 10/020,853
Filed : December 11, 2001

65. (PREVIOUSLY PRESENTED) The lens of Claim 1, wherein at least one surface of said lens is sterilized.

66. (PREVIOUSLY PRESENTED) The lens of Claim 1, wherein at least one surface of said lens is deflashed, polished, and cleaned.

67. (PREVIOUSLY PRESENTED) The lens of Claim 22, wherein:
said first anterior translation member and said first posterior translation member meet at a first apex; and
said second anterior translation member and said second posterior translation member meet at a second apex.

68. (NEW) The lens of Claim 1, wherein the force by the ciliary muscle of the eye is due to relaxation of the ciliary muscle such that tension in the zonules of the eye is increased.

69. (NEW) The lens of Claim 1, wherein the force by the ciliary muscle of the eye is due to contraction of the ciliary muscle such that tension in the zonules of the eye is decreased.